



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,225	09/26/2003	Ivan Alferiev	T1118-20074	2873

3000 7590 10/06/2005  
CAESAR, RIVISE, BERNSTEIN,  
COHEN & POKOTILOV, LTD.  
11TH FLOOR, SEVEN PENN CENTER  
1635 MARKET STREET  
PHILADELPHIA, PA 19103-2212

EXAMINER

VENCI, DAVID J

ART UNIT PAPER NUMBER

1641

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/672,225

Applicant(s)

ALFERIEV ET AL.

Examiner

David J. Venci

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on January 3, 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*son*

***Election/Restrictions***

This application contains claims directed to the following patentably distinct groups of the claimed invention. Restriction to the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-22, drawn to methods for determining a binding capacity, classified in class 436/172, for example.
- II. Claims 23-30, drawn to kits, classified in class 435/810, for example.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product of Invention II can be used in a materially different process, for example, in a photodynamic therapeutic process.

Examination burden is established because the scope of prior art search required for Group II does not appear coextensive with the scope of prior art search required for Group I. For example, a search for the fluorophore of Group II does not appear to require a search for the method steps of Group I.

This application contains claims directed to the following patentably distinct species of the claimed invention. Restriction to the following species is required under 35 U.S.C. 121:

1. Select ONE cleavable bond from:
  - a. Aromatic azo group (claims 2 and 4); OR
  - b. Disulfide bond (claims 2-3).
    - i. If and only if selection = "Disulfide bond (claims 2-3)", then select ONE thiol-containing fluorophore from claims 5-11 and 18.

Art Unit: 1641

2. Select ONE functional group from:

- a. Amino group (claim 13);
- b. Thiol group (claim 13);
- c. Protected thiol group (claim 13); OR
- d. Epoxy group (claim 13).

3. Select ONE reactive moiety from:

- a. Thiol (claim 16);
- b. Thiol-reactive group (claim 16);
- c. Group adapted to be converted into a thiol (claim 16);
- d. Group adapted to be converted into a thiol-reactive group (claim 16);
- e. Amino group (claim 17); OR
- f. Dithio group (claim 19).

4. Select ONE surface from:

- a. Polymer/ polyurethane (claims 14-15);
- b. Metal (claim 14);
- c. Biomaterial (claim 14);
- d. Ceramic (claim 14); OR
- e. Semi-conductor (claim 14).

5. Select ONE reducing agent from:

- a. Dithiothreitol (claim 20);
- b. B-mercaptoethanol (claim 20);
- c. Mercaptoethylamine HCl (claim 20);
- d. Borohydride/Sodium borohydride (claims 20-21);
- e. Tris(2-cyanoethyl)phosphine (claims 20 and 22);
- f. Tris(2-carboxyethyl)phosphine (claims 20 and 22); OR
- g. Trimethylphosphine (claims 20 and 22).

Applicants are required under 35 U.S.C. 121 to elect ONE disclosed species from each of groups 1-5, supra, for prosecution on the merits. In addition, if species (1)(b) is selected, then Applicants are required to select ONE thiol-containing fluorophore from claims 5-11 and 18. Applicants' selection of ONE thiol-containing fluorophore from claims 5-11 and 18 must be consistent with Applicants' selected functional group (i.e. group 2) and chemically reactive with Applicants' selected reactive moiety (i.e. group 3). Applicants' selected functional group (i.e. group 2) and reactive moiety (i.e. group 3) must be chemically reactive with Applicants' selected reducing agent (i.e. group 5).

Art Unit: 1641

The claims shall be restricted to Applicants' elected species if no generic claim is finally held allowable. Currently, claims 1-2 are generic.

The species in each of groups 1-5, supra, are chemically distinct from each other. In combination, the species in each of groups 1-5, supra, result in a method having multiple variations of chemically distinct reaction mechanisms. Examination burden is established because the scope of prior art search required for each chemically distinct reaction mechanism does not appear coextensive with other reaction mechanisms.

Applicant is advised that a reply to this requirement must include an identification of the species that are elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

In September 2005, Examiner requested an oral election to the above restriction requirement. An agent for Caesar, Revise, Bernstein, Cohen & Pokotilow, Ltd. declined to make said oral election.

Art Unit: 1641

Applicant is advised that a complete reply to this requirement must include election of both an invention and species, even though the requirement may be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Venci whose telephone number is 571-272-2879. The examiner can normally be reached on 08:00 - 16:30 (EST). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David J Venci  
Examiner  
Art Unit 1641

djv

  
LONG V. LE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600

09/30/05